



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,944	02/14/2001	Pui Lun Lau	57761.000144	4219

7590 10/18/2005

THOMAS M. BLASEY
HUNTON & WILLIAMS
1900 K STREET, N.W.
WASHINGTON, DC 20006-1109

EXAMINER

MEUCCI, MICHAEL D

ART UNIT	PAPER NUMBER
----------	--------------

2142

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,944

Applicant(s)

LAU, PUI LUN

Examiner

Michael D. Meucci

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to Request for Continued Examination (RCE) filed 29 July 2005.
2. Examiner notes petition decision according a filing date of 31 October 2000.

Response to Amendment

3. The status identifier of claim 44 (added) is not an acceptable status identifier and is non-compliant. However, the examiner will presume the applicant meant to list (newly added) in its place, which is an acceptable alternative for newly added claims. Correct status identifiers should be in place in the next response to this office action. Applicant shall list claim 44 as (previously presented) or an acceptable alternative if not amended. A table of status identifiers and acceptable alternatives is set forth in 37 CFR 1.121(c).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 13, 16-18, 20 and 30 rejected under 35 U.S.C. 102(e) as being anticipated by Bader et al. (U.S. 6,112,249) hereinafter referred to as Bader.

a. As per Claim 1, Bader teaches a network comprising a primary network controller (lines 63-65 of column 7); a plurality of network devices wherein each network device is connected to the primary network controller by a respective primary network path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 50-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

b. As per Claim 13, Bader teaches the primary network controller comprising a computer. "The network controller periodically checks the status of the primary network communications path, to determine if that path has been reactivated," (lines 5-8 of column 8). It is inherent that the network controller is a computer in the system disclosed by Bader.

c. As per Claim 16, Bader teaches at least some of the network devices comprise universal relays, (lines 32-44 of column 7)

d. As per Claim 17, Bader teaches at least some of the network devices comprise process controllers, (lines 21-26 of column 5).

e. As per Claim 18, Bader teaches a control and data acquisition system comprising the network of Claim 1, (lines 32-44 of column 7).

f. As per Claim 20, Bader teaches at least one network controller (lines 63-65 of column 7); a plurality of universal relays (lines 32-44 of column 7); a plurality of process controllers, (lines 21-26 of column 5); each network device (universal relay and process controllers) is connected to the primary network controller by a respective primary network path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller; wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 50-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

g. As per Claim 30, Bader teaches the primary network controller comprising a computer. "The network controller periodically checks the status of the primary network communications path, to determine if that path has been reactivated," (lines 5-8 of column 8). It is inherent that the network controller is a computer in the system disclosed by Bader.

h. As per claim 44, Bader teaches: the primary network controller blocking the failed primary network path includes disabling a port on a bridging device on the

primary network path. Although Bader does not explicitly disclose disabling a port, removing the primary network communications path as an option in the database (lines 3-5 of column 8) *inherently* disables the port.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Bass (U.S. 3,920,975).

Bader fails to teach the primary network controller periodically testing a condition of the predetermined backup network paths. However, Bass discloses: "The remote test and control system of the invention provides remote testing and switching capability for a data communications network having primary and backup facilities through a network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the backup network paths. "A network controller located at a central location which contains standard test equipment for generating and analyzing the test signals that are applied to the network for troubleshooting as well as generating and transmitting to the individual network remote data terminal stations

command signals for effectuating switching changes thereat to reconfigure the network by switching between primary and backup facilities and also establish various test modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network controller periodically test a condition of the backup network paths in the system as taught by Bader.

b. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Tomioka (U.S. 5,452,115).

Bader fails to teach: "a secondary network controller that takes over control of the network if the primary network controller fails, wherein each network device is connected to the secondary network controller by a respective secondary network path; at least one predetermined secondary backup network path connecting each network device with the secondary network controller, wherein each predetermined secondary backup network path is blocked by the network controller when a corresponding secondary network path is active; and wherein, when a secondary network path between a network device and the secondary network controller fails, the secondary network controller blocks the inoperable secondary network path and switches to one of the predetermined secondary backup network paths." However Tomioka discloses: "If, as shown in FIG. 21, there is provided a backup network controller 9, switching may be made to the backup network controller 9," (lines 51-53 of column 16).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network of Bader to comprise a

secondary network controller as described in the system of Tomioka having the characteristics of the primary network controller as described in Bader. Likewise, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention that the respective secondary network paths would be complimentary to the primary network paths. Likewise, the secondary backup network paths would be complimentary to the primary backup network paths disclosed in Bader (see claim 1 rejection above).

"The monitor station should preferably be authorized to stop the network controller when the fault of the controller is so severe that immediate recovery is difficult," (lines 48-51 of column 16 in Tomioka). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the system with a secondary network controller having respective secondary network paths, at least one secondary backup network path connecting each network device to the secondary network controller having a secondary network path that is blocked by the network controller when a corresponding secondary network path is active, and having the secondary network controller block the inoperable path and switch to a secondary backup path in the system as taught by Bader.

c. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader and Tomioka as applied to claim 3 above, and further in view of Bass.

Bader fails to teach the secondary network controller periodically testing a condition of the predetermined secondary backup network paths. However, Bass discloses: "The remote test and control system of the invention provides remote testing

and switching capability for a data communications network having primary and backup facilities through a network controller,” (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the secondary backup network paths. “A network controller located at a central location which contains standard test equipment for generating and analyzing the test signals that are applied to the network for troubleshooting as well as generating and transmitting to the individual network remote data terminal stations command signals for effectuating switching changes thereat to reconfigure the network by switching between primary and backup facilities and also establish various test modes,” (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network controller periodically test a condition of the secondary backup network paths in the system as taught by Bader.

d. Claims 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law et al. (U.S. 6,373,838 B1) hereinafter referred to as Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 10-megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: “In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a

100BaseT full duplex Ethernet, and a 10BaseT Ethernet,” (lines 59-62 of column 3) and “The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber,” (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant’s invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 10-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. “The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA,” (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to comprise the network paths of a 10 megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

e. Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 5 above, further in view of Selig et al. (U.S. 5,521,958) hereinafter referred to as Selig.

Bader fails to teach the 10-megabit per second connection comprising a wireless connection. However, Selig discloses: “The first communication path is a wireless path,” (Abstract); and “a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit,” (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant’s invention would have clearly recognized that it is quite advantageous for the 10-megabit per second

connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 10-megabit per second connection of a wireless connection in the system as taught by Bader.

f. Claims 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 100-megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 100-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been

motivated to comprise the network paths of a 100 megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

g. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 9 above, further in view of Selig.

Bader fails to teach the 100-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 100-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 100-megabit per second connection of a wireless connection in the system as taught by Bader.

h. Claims 14-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law.

Bader fails to teach the primary network paths and primary backup network paths comprising a plurality of network bridges. However, Law discloses: "The primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the

secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines 63-66 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network paths and primary backup network paths to comprise a plurality of network bridges. "Two or more switches can be connected together to increase the total number of ports available for connecting NAS's together," (lines 19-22 of column 4 in Law). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the primary network paths and primary backup network paths of a plurality of network bridges in the system as taught by Bader.

i. Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 18 above, in view of Sanderson (U.S. 5,864,284).

Bader fails to teach the primary network controller monitoring the status of an electrical power grid through the network. However, Sanderson discloses: "In addition the data communication system of the present invention may serve as part of a control and monitoring system for a power network or power grid," (lines 46-49 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network controller to monitor the status of an electrical power grid through the network. "The system for providing data communication service to the customer premise as shown in FIG. 1 may be modified to provide station-to-station communications for internal use of a power company," (lines 43-46 of column 3 in Sanderson). It is for this reason that one of

ordinary skill in the art at the time of the applicant's invention would have been motivated to have the primary network controller monitor the status of an electrical power grid through the network in the system as taught by Bader.

j. Claim 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Bass.

Bader fails to teach the primary network controller periodically testing a condition of the predetermined backup network paths. However, Bass discloses: "The remote test and control system of the invention provides remote testing and switching capability for a data communications network having primary and backup facilities through a network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the backup network paths. "A network controller located at a central location which contains standard test equipment for generating and analyzing the test signals that are applied to the network for troubleshooting as well as generating and transmitting to the individual network remote data terminal stations command signals for effectuating switching changes thereat to reconfigure the network by switching between primary and backup facilities and also establish various test modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network controller periodically test a condition of the backup network paths in the system as taught by Bader.

k. Claim 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 10-megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 10-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 10 megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

l. Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law, as applied to claim 22 above, further in view of Selig.

Bader fails to teach the 10-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 10-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 10-megabit per second connection of a wireless connection in the system as taught by Bader.

m. Claims 26-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 100-megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 100-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 100 megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

n. Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 26 above, further in view of Selig.

Bader fails to teach the 100-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 100-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 100-

megabit per second connection of a wireless connection in the system as taught by Bader.

o. Claim 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Law.

Bader fails to teach the primary network paths and primary backup network paths comprising a plurality of network bridges. However, Law discloses: "The primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines 63-66 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network paths and primary backup network paths to comprise a plurality of network bridges. "Two or more switches can be connected together to increase the total number of ports available for connecting NAS's together," (lines 19-22 of column 4 in Law). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the primary network paths and primary backup network paths of a plurality of network bridges in the system as taught by Bader.

p. Claims 33-34 and 38-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass.

Bader teaches a network comprising a primary network controller (lines 63-65 of column 7); a plurality of network devices wherein each network device is connected to the primary network controller by a respective primary network path (lines 47-48 of

column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 50-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

Bader fails to teach the step of monitoring the status of the primary network path. However, Bass discloses: "The remote test and control system of the invention provides remote testing and switching capability for a data communications network having primary and backup facilities through a network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the backup network paths. "A network controller located at a central location which contains standard test equipment for generating and analyzing the test signals that are applied to the network for troubleshooting as well as generating and transmitting to the individual network remote data terminal stations command signals for effectuating switching changes thereat to reconfigure the network by switching between primary and backup facilities and also establish various test modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network

controller periodically test a condition of the backup network paths in the system as taught by Bader.

q. Claims 35 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass as applied to claims 33 and 38 respectively above.

Bader teaches at least some of the network devices comprise universal relays, (lines 32-44 of column 7).

r. Claims 36 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass as applied to claims 33 and 38 respectively above.

Bader teaches at least some of the network devices comprise a process controller, (lines 21-26 of column 5).

s. Claims 37 and 42-43 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass, as applied to claims 33 and 38 respectively above, in view of Law.

Bader fails to teach the primary network paths and primary backup network paths comprising a plurality of network bridges. However, Law discloses: "The primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines 63-66 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network paths and primary backup network paths to comprise a plurality of network bridges. "Two or more switches can be connected together to increase the total number of ports available for

connecting NAS's together," (lines 19-22 of column 4 in Law). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the primary network paths and primary backup network paths of a plurality of network bridges in the system as taught by Bader.

Response to Arguments

7. Applicant's arguments filed 29 July 2005 have been fully considered but they are not persuasive. All of applicant's remarks/arguments are directed toward subject matter disclosed in independent claims 1 and 20.

(A) Regarding claims 1 and 20, applicant contends that Bader does not teach the limitations: at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active; and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (first full paragraph on page 12 of Remarks). The examiner respectfully disagrees.

The applicant believes that Bader does not "block" network paths as recited in the claims. The examiner contends that the citations in Bader, in fact, do perform the step of blocking as claimed in the instant application. "Block" as defined by

dictionary.com (www.dictionary.com) as a transitive verb states: To stop or impede the passage of or movement through; obstruct: *block traffic*. Line 58 of column 7 through line 10 of column 8 in Bader discloses: "Once the secondary network communications path is activated, the network control hardware/software reinitiates on the secondary network communications path (block 26) the communications sessions which were ongoing on the primary network communications path at the time of the path failure. Additionally, the network controller assigns any new communications sessions to the secondary network communications path (block 28). As will be recognized by those of skill in the art, such a reassignment may be implemented in any number of ways, including setting the "cost" associated with the secondary communications path to a level lower than the cost associated with the primary network communications path or by removing the primary network communications path as an option in the database of available paths. Once the secondary path is activated, the network controller periodically checks the status of the primary network communications path, to determine if that path has been reactivated (block 30). Unless the primary path has been reactivated, the network control hardware/software continues to assign all new communications sessions to the secondary network communications path." In summary, all existing communication sessions and all new communication sessions are assigned to the secondary network communications path, effectively *stopping traffic* through the primary communication path. This is accomplished by removing the primary path as a communication option (lines 3-5 of column 8 in Bader), or weighting the secondary path such that no communication can be made over the primary path

(line 67 of column 7 through line 3 of column 8 in Bader), each case forcibly blocking all communications on the primary path.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Seaman (U.S. 5,790,808) discloses state transition in primary/backup communication paths.

Isfeld et al. (U.S. 5,802,278) discloses bridge/router high performance networking.

Jain et al. (U.S. 6,330,229 B1) discloses blocking/disabling ports and switching to backup.

Rao et al. (U.S. 6,674,756 B1) discloses disabling backup ports when primary ports are available.

Phaltankar (U.S. 6,714,549 B1) discloses ports in blocking mode until primary path failure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached at (571) 272-3868. The fax phone number for this Group is 571-273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35

U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER